



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,134	12/01/2003	Harald Seidl	INF-116	1212
48154	7590	08/08/2005	EXAMINER	
SLATER & MATSIL LLP 17950 PRESTON ROAD SUITE 1000 DALLAS, TX 75252			GARCIA, JOANNIE A	
			ART UNIT	PAPER NUMBER
			2823	

DATE MAILED: 08/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

Office Action Summary	Application No. 10/724,134	Applicant(s) SEIDL ET AL.	
	Examiner Joannie A. García	Art Unit 2823	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-19, 26-30, 33 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>05-23-2005</u> . | 6) <input type="checkbox"/> Other: _____ |

Claims 16, 21-28, are objected to because of the following informalities:

Claim 16 recites the limitation "upper region" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 14-19, 26-29, 30, 33, and 34, are rejected under 35 U.S.C. 102(e) as being anticipated by Cabral, Jr. et al (US 2004/0092073 A1).

Cabral, Jr. et al discloses a trench capacitor having a first electrode plate 33 and a second electrode plate 35 and a layer 34 made of dielectric formed between the first electrode plate and the second electrode plate, wherein the second electrode plate is formed from at least a layer made of ruthenium or ruthenium (IV) oxide and a layer made of polysilicon (Figure 29, and Paragraph 0095), wherein the first electrode plate is made of a metal material (Paragraph 0094), wherein at least one of the electrode plates is formed of ruthenium or ruthenium (IV) oxide (Paragraphs 0094-0095), and wherein an insulation section 36 is provided in an upper region of a trench wall adjoining an opening of the trench capacitor (Figure 29 and Paragraph 0094).

Cabral, Jr. et al, discloses as well, a capacitor comprising a first electrode 33 that includes a first sidewall, a bottom surface and the a second sidewall, the first sidewall, the bottom surface

Art Unit: 2823

and the second side forming an enclosure (Figure 29, and Paragraph 0094), wherein the first electrode comprises doped silicon (Paragraph 0094), a dielectric layer 34 overlying the first sidewall, the bottom surface and the second sidewall (Figure 29, and Paragraph 0094), and a metal layer 35 overlying the dielectric layer and lining the first sidewall, the bottom surface and the second sidewall, the metal layer comprising ruthenium or ruthenium oxide (Figure 29, and Paragraph 0095), and at least one conductive material 82 overlying the metal layer and filling at least a portion of the enclosure (Figure 29, and Paragraph 0097), wherein the capacitor comprises a trench capacitor, wherein the doped silicon is formed along sidewalls of a trench formed in a silicon body 31/31/83, wherein the dielectric layer and the metal layer line the sidewalls of the trench, and wherein the at least one conductive material comprises a conductive layer the fills at least a portion of the trench (Figure 29, and Paragraphs 0093-0097).

Claims 13, 20-25, 31 and 32, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joannie García whose telephone number is (571) 272-1861. The examiner can normally be reached on Monday through Friday.

Art Unit: 2823

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith, can be reached on (571) 272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JAG

August 3, 2005

GFourson
Primary Examiner



George Fourson
Primary Examiner
Art Unit 2823